

# Motivating Employee Ideas Through Contests: Field Experimental Evidence

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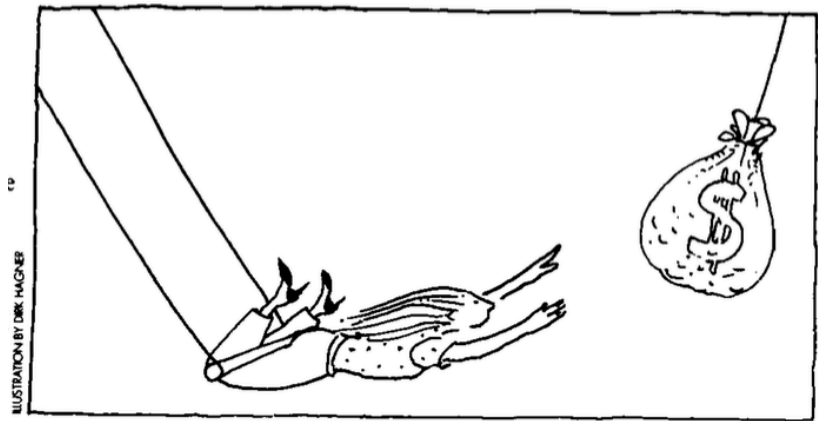
13th Open And User Innovation Society Meeting, July 2015

with E. Isselbacher, O. Jung, K. Lakhani, M. Menietti

*“... AT&T has begun to open up its innovation process beyond its labs and to encourage employee participation. [...] Employees vote for ideas and [...] Leaders then decide whether or not to grant seed funding to create prototypes. [...] AT&T has allocated \$44 million to fund ideas ranging from customer-service enhancements to new technologies.”*  
*Source: WSJ, 2014*

Other examples in the news: Apple, Siemens, IBM, Thomson Reuters, SONY, NASA, etc.

... what motivate employees to participate?



# Previous literature

## Prizes

- ▶ compensate workers for effort (Gibbs et al., 2014; Lazear & Rosen, 1981)
- ▶ help workers mitigate a free riding problem (Lange et al., 2007; Morgan, 2000; Morgan & Sefton, 2000);

## "Intrinsic" incentives

- ▶ altruism
- ▶ status (Moldovanu et al., 2007)
- ▶ peer recognition, job satisfaction, etc. (Blanes i Vidal & Nossol, 2011; Deci & Ryan, 1985; Kosfeld & Neckermann, 2011)

# Methodology

**The context:** an eight-week internal contest for ideas within a medical institution in the US (over 1200 employees)

**Treatment:** solicitation emails encouraging employees to make submissions by the opportunity of winning a monetary reward, with a control group in which the monetary reward was not mentioned

**Outcomes:** (a) the decision to participate with a submission  
(b) the quality of the submissions

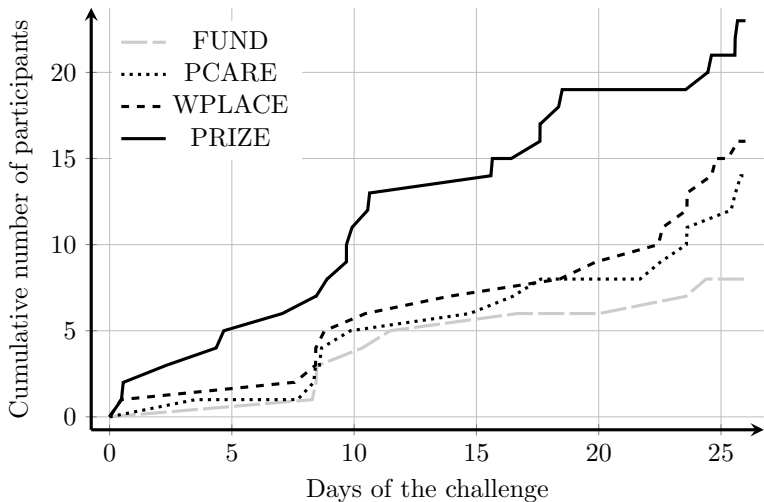
# Results

- ▶ Positive effect on participation associated with monetary rewards (on average a 3 percentage point increase in participation).
- ▶ Women reacted more strongly than men, controlling for differences in the professional status of the worker
- ▶ We don't detect any effect on the distribution of the quality of submissions

***Submit your ideas to [(1)win an Apple iPad mini| (2.1)improve patient care at HC | (2.2)Improve the workplace at HC | (2.3)win project funding up to \$20,000 to turn your ideas into actions]***

*[...] All [employees] are eligible to submit ideas online. We encourage you to submit as many ideas as you have: no ideas are too big or too small!*

*Submissions will be reviewed and judged in two rounds, first [...] via crowd-voting, and then by an expert panel. Winning ideas will be eligible for project implementation funding [...]*



Employee participation over time



## Sample Average Treatment Effect of Prizes on Participation

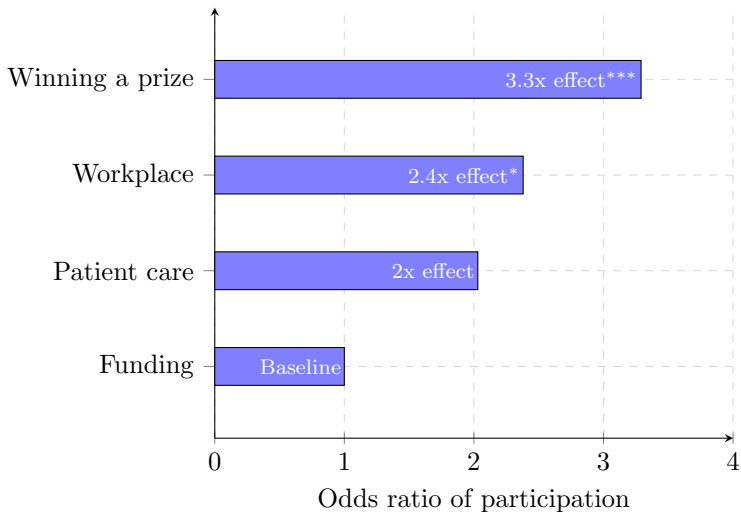
	N	Estimate	Std. Error	t value	Pr(> t )
Full sample	1,237	0.034	0.014	2.401	0.016
Women	890	0.037	0.017	2.209	0.027
Men	347	0.024	0.026	0.934	0.351
Physicians	226	0.038	0.032	1.179	0.240
Nursing workers	649	0.026	0.020	1.332	0.183
Other workers	362	0.044	0.026	1.704	0.089

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Logistic Regression for odds of participation (ctrl: gender, job, job X gender, office)

## Logistic Coefficients for Participation, Differences Between The Genders

	(1)	(2)	(3)	(4)	(5)
Patient care	-1.04 (1.17)	1.18** (0.58)	1.20** (0.58)	1.17** (0.58)	1.18** (0.58)
Workplace	1.13 (0.74)	0.83 (0.60)	0.84 (0.60)	0.82 (0.60)	0.83 (0.60)
Winning iPad	0.76 (0.76)	1.42** (0.56)	1.48*** (0.56)	1.42** (0.56)	1.43** (0.56)
male			0.50 (0.77)	0.59 (0.81)	0.67 (1.09)
Patient care X male			-2.30* (1.30)	-2.22* (1.30)	-2.21* (1.31)
Workplace X male			0.18 (0.94)	0.18 (0.95)	0.30 (0.95)
Winning iPad X male			-0.75 (0.93)	-0.71 (0.94)	-0.66 (0.94)
Constant	-4.03*** (0.99)	-5.10*** (0.93)	-3.95*** (0.50)	-4.92*** (0.72)	-5.04*** (0.92)
Profession	Yes	Yes	No	Yes	Yes
Office	Yes	Yes	No	Yes	Yes
Gender X Profession	No	No	No	No	Yes
Observations	347	890	1,237	1,237	1,237
Log Likelihood	-56.24	-167.73	-231.90	-226.29	-224.08

Note:

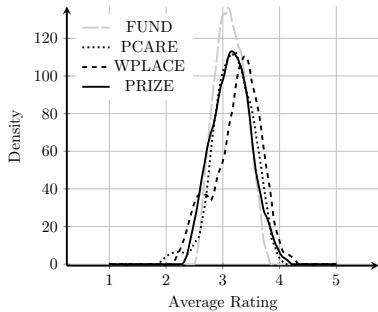
\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

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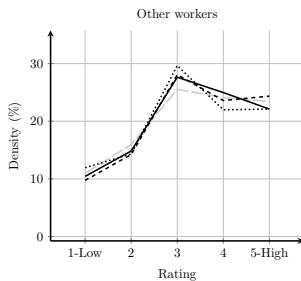
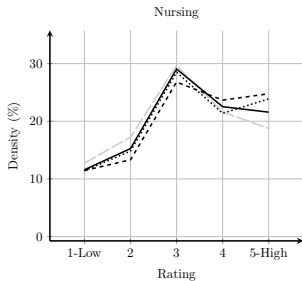
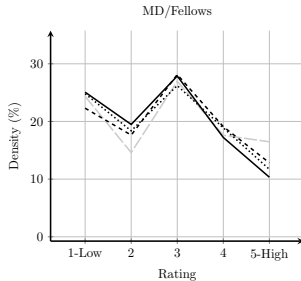
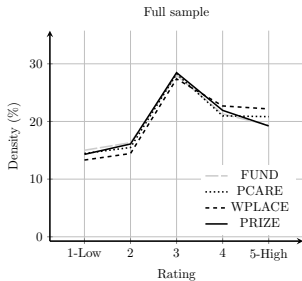
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## Quality of ideas

- ▶ 178 (verified) employees
- ▶ 12,000 ratings (1 to 5)
- ▶ Each idea evaluated by ~100 different persons
- ▶ KS test rejects any difference

Quality of Ideas as from  
employees votes



## Distribution of Ratings



# Conclusions

- ▶ Evidence is consistent with theory: prizes raise participation (help private provision of public goods)
- ▶ Evidence of differences in preferences between the genders (as in Croson & Gneezy, 2009) may have strong practical implications
- ▶ Quality unchanged after monetary incentives (what is the underlying cost function?)

# Thanks!

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